

ASCE – INDOT
STRUCTURES COMMITTEE
MEETING NO. 83 – MINUTES

Meeting Date: May 2, 2019
Meeting Time: 9:00 A.M. (edt)
Meeting Location: INDOT Room N642

- **Review and approve Meeting 72, 73, 74, 75, 76, 78, 79, 80, 81, and 82 minutes.**
 - Brandon Arnold selected as new meeting note taker and preparer of meeting minutes.
 - Previous minutes not reviewed.
- **Bridge Design Conference Update and New Date (McCool)**
 - Overall, reviews and feedback from last conference were very positive; respondents stated that topics were useful
 - Committee discussed use of recurring date for conference
 - J. Hunter wants to avoid letting dates in January
 - A. Rearick & M. Wenning would like mid-to-late January
 - B. Arnold requested it be scheduled with Inspection Conference to accommodate those that travel from far away
 - Request made to schedule considering TRB & Contractor Conference
 - J. Hunter will take lead and look to schedule on January 21, 2020
 - Request was made to use INDOT Auditorium instead
- **ABC Conference (Hunter)**
 - J. Hunter promoted attendance at Accelerate Bridge Conference held in Miami, FL @ Florida International University from December 11 – 13, 2019
 - Conference provides more in-depth knowledge and multiple speakers vs ABC conference held last year at INDOT
 - M. McCool recommended J. Hunter send information through INDOT _listserve
 - S. Porter stated Florida International University also provides webinars on the topic
- **Life-Cycle Cost Update (Spahr, White, Wenning)**
 - Rewrite of IDM Chapter for Life-Cycle Cost analysis has been sent to E. Phillips for review. It will then be sent to FHWA for review.
 - Bridge Design Aids have been posted to INDOT's website

- i. Sample spreadsheet with LCC calculations provided
 - ii. Example comparison scenarios included
- INDOT will expect designers to learn from and use the Design Aids
- Item Complete – great job by Ed and his team!

- **Research Needs & Innovative Ideas (Rearick)**
 - Research need statements are currently being developed for the following topics which will then be presented to JTRP to request funding:
 - i. Load Rating in LRFR for all INDOT bridges
 - ii. Hydraulic Joint Probability Analysis for Indiana specific watersheds
 - iii. Accelerated steel bridge fabrication
 - iv. Culvert Inspection Guidelines & Frequencies for INDOT routes
 - The following topics are labeled as contingent per approval of the above topics:
 - i. Lateral Pile Loads & Stability in Soft Soils
 - ii. Pedestrian Bridge Inspection Guidelines

- **Pile Design for 3-Sided Structures (Schickel, White, Borcharding, Hunter)**
 - B. Borcharding has contacted CONTECH. They might be willing to share how they design piles for their 3-sided structures.
 - P. White stated next step is to run design by a Subcommittee, then guidance needs to be developed for all designers.
 - M. McCool recommended this topic be presented at the next Bridge Conference

- **Semi-Integral Bent Details (Wagner, McCool, White, Schickel, Borcharding)**
 - S. Wagner is working on updated IDM drawings for both new construction and rehabilitations, which don't allow choice of pile spacing or embedment depth
 - Illinois DOT details are being investigated

- **Expansion Joint Update – Review RSP, Design Aid, and Patching Details (White, Wagner)**
 - Precompressed Foam Joint (PFJ) USP is being submitted for RSP. Bridge Joint Nosing (BJN) USP will not as of yet.
 - PFJ Design Aids will be made available, but may also become INDOT Std Dwg.
 - i. M. McCool requested information on PFJ & BJN be posted to Design Aids soon
 - PFJ will be used in future to replace terminal joints
 - INDOT is investigating when to use new terminal joint details with PFJ with HMA pavement
 - Item closed

- **Thin Deck vs Joint Replacement (White, Yeager, Rearick, Wagner)**
 - New RSP is coming out for thin deck overlays
 - P. White wants to create Design Aid for time & construction considerations, particularly considering road closure periods as they relate to overlay cure times
 - M. McCool described contractors installing overlay dams with thin deck overlays
 - S. Wagner stated we should issue Design Aid immediately to address these issues

- **LRFD vs LFD on Rehabilitation Projects (Hunter, McCool, Eichenauer, Wenning, Arnold)**
 - First meeting held on April 26, 2019
 - Creating survey for all design consultants
 - Important issue for INDOT inventory!
 - Goal is to determine our acceptance of exceedance of LRFD capacity requirements
 - Moot point for overlay-type projects (preventative maintenance)
 - i. J. Hunter doesn't want to completely ignore the issue, however
 - Policy needed to determine how to address superstructure replacements, widenings, etc. where existing substructure "fails" LRFD provisions
 - Similarly, policy needed to determine how to address LRFD geometric "b/t" requirements
 - Final result may be a "Level 1" or similar exception process requiring INDOT review and evaluation for structural capacity issues related to existing components being "overstressed" per current LRFD provisions

- **Spiral Reinforcement Update (Hailat)**
 - Item approved by FHWA
 - Design Memo 19-04 released on May 6, 2019
 - Item complete

- **Sand Bag Cofferdams (Hunter, Phillips)**
 - Greg Couch (INDOT Environmental Manager) was present to answer questions
 - i. Stated desire for standard details for multiple dewatering scenarios, but thinks this should come from the construction community and part of SWQCP, not designers.
 - ii. E. Spahr is going to work with coordinating with IDNR, etc. to create details, practices, requirements, etc. for design community.
 - S. Porter stated putting such details in plans is prescribing means and methods and contractors say it is a waste of time. Recommended INDOT Area Engineers and contractors be consulted in the development of details and plan requirements.
 - E. Phillips suggested using general callouts for materials in details, i.e. don't make "sandbags" a requirement.

- **Elastomeric Bearing Pads (Wenning, White, Porter)**
 - M. Wenning working with Professor Frosch (Purdue) who suggests eliminating the use of natural rubber in pads
 - i. A. Rearick does not agree
 - P. White & M. Wenning want “vulcanized” back in INDOT Standard Specifications
 - i. Recommend putting “vulcanized” to steel taper plates in plans
 - **New subcommittee formed** for the topic. Members are M. Wenning, P. White, & S. Porter

- **Additional Item #1 – INDOT Promotions (Hunter)**
 - S. Wagner has been promoted to Bridge Design Director
 - E. Phillips has been promoted to Assistant Chief Engineer

- **Additional Item #2 – Vandal Fencing on All Bridges over RR (Hunter)**
 - One particular railroad company has requested that fencing be placed on all high-speed bridges over railroads
 - i. J. Hunter is pushing back – MASH criteria and potential to have fencing hanging over/on tracks after vehicular collision into railing above
 - ii. J. Hunter will be releasing guidance on the topic

- **Additional Item #3 – Prestress Services on INDOT Structures Committee (Hunter)**
 - Prestress Services (Barry Barger) wants to put one of their new engineers on the INDOT Structures Committee
 - Prestress Services wants standardization of design of transportation analysis of beams
 - i. M. McCool currently involved on PCI committee regarding the topic
 - 1. PCI Manual has chapter on this topic
 - 2. PCI has spreadsheets developed to analyze beams from “bed to bridge”
 - ii. J. Hunter wants analysis by contractors and fabricators
 - iii. M. McCool suggested Design Aids be posted
 - iv. **New subcommittee formed**, “Girder Stability”. Chair is M. McCool. Other members are B. Arnold, S. Porter, & M. Eichenauer

- **Additional Item #4 – Link Slabs (Spahr)**
 - Purdue has performed recent research on the topic. This will be posted to Design Aids.
 - AASHTO is releasing guide on Accelerated Bridge Construction. Link Slabs are a topic within the guide.

- **Next INDOT Structures Committee Meeting tentatively scheduled for July 11, 2019**